

Amendments to the Drawings:

The drawing sheet attached in connection with the above-identified application containing Figure 16 is being presented as a new formal drawing sheet to be substituted for the previously submitted drawing sheet. The drawing Figure 16 has been amended.

The specific changes which have been made to Figure 16 is the number "8" identifying the memory unit has been changed to the number "80."

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claim 19 is cancelled. Claims 1-12, 14-18, and 20-22 are currently being amended.

This amendment changes and deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-18 and 20-22 are now pending in this application.

Amendments to the Specification

The specification was objected to for failing to list section headings as required by 37 CFR § 1.77(b). In addition, the title was objected to for not being descriptive. In response, Applicant has amended the specification to include the required headings and has amended the title to one that is clearly indicative of the invention to which the claims are directed. Accordingly, Applicant requests reconsideration and that the objection be withdrawn.

Amendments to the Drawings

The drawings were objected to because “Memory Unit,” on FIG. 16 is incorrectly labeled as 8 instead of 80. In response, Applicant has amended FIG. 16. Accordingly, Applicant requests reconsideration and that the objection be withdrawn.

Claim Objections

Claims 6, 7, 9, 16-17 and 21-22 were objected to for informalities. In response, Applicant has amended claims 6, 7, 9, 16-17 and 21-22. Applicant respectfully submits that the Examiner’s interpretation of claim 7 is incorrect. Applicant asserts that claim 7 is clear on its face and does not require amendment. Accordingly, Applicant requests reconsideration and that the rejection be withdrawn.

Claim Rejections under 35 U.S.C. § 101

Claims 20-22 were rejected under 35 U.S.C. § 101 for not being directed to statutory subject matter and for allegedly being directed to a machine and process. In response, Applicant amends claims 20-22 to recite a computer program product embodied in a computer readable medium. Accordingly, Applicant respectfully requests reconsideration and that claims 20-22 be allowed.

Claim Rejections under 35 U.S.C. § 112

Claims 12, 18 and 20-22 were rejected under 35 U.S.C. § 112. Specifically, claim 12 was rejected because the Office Action asserts that a “second control device” is not disclosed in the specification. Claim 18 was rejected for listing procedures and not steps. Claims 20-22 were rejected for allegedly not conforming with one statutory class.

In response, Applicant amends claims 18 and 20-22. Claim 18 is composed of steps and claims 20-22 are now directed to a computer program product embodied in a computer readable medium. Thus, Applicant requests reconsideration and that claims 18 and 20-22 be allowed.

Claim Rejections under 35 U.S.C. § 102

Claims 1, 12, 14 and 20 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,326,806 (“Fallside”). Claims 18-19 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,658,564 (“Smith”). In response, without agreeing or acquiescing to the rejection, Applicant amends independent claims 1, 12, 14, 16, 20 and 21 and cancels claims 18 and 19. Applicant respectfully traverses the rejection for the reasons set forth below.

Applicant relies on M.P.E.P. § 2131, entitled “Anticipation – Application of 35 U.S.C. § 102(a), (b) and (e)” which states, “a claim is anticipated only if each and every element set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Applicant respectfully submits that Fallside does not describe each and every element of the claims.

Claims 1 and 12 are directed to an electronic computer implemented using reconfigurable hardware. Claims 14 and 16 are directed to a control method for an electronic computer implemented using reconfigurable hardware. Claims 20 and 21 are directed to a computer program product which when executed performs a method implemented using reconfigurable hardware. Specifically, the above claims require a device and method for dividing an application program into a plurality of processing units, a method and a processing device including, reconfigurable hardware, that can create a logic circuit for each said processing unit, and a control device and method for executing a command specified by the processing device. The command is executed when the processing device detects a predetermined condition and includes a command for execution of switching said programs logically creating the reconfigurable hardware.

In sum, the claimed invention divides an application program into processing units and creates a logical circuit for every processing unit in reconfigurable hardware to improve processing speed at low cost. The present invention provides a concrete means for dividing an application program into processing units, generating a connection between the divided processing units as a sequence and a control device which executes the sequence. Accordingly, the claimed invention can implement an application program that exceeds the capacity of the hardware present in the system.

Fallside and Smith do not disclose, teach or suggest each and every element of independent claims 1, 12, 14, 16, 18, 20 and 21. Fallside is directed to a FPGA-Based system. Fallside does not disclose the using a FPGA as reconfigurable hardware. Further, Fallside fails to disclose a device and method for dividing an application program into a plurality of processing units. Further, while Fallside teaches a control circuit for reconfiguring a FPGA in response to a predetermined condition, Fallside does not disclose, teach or suggest a method and a processing device including, reconfigurable hardware, that can create a logic circuit for each processing unit. In addition, in contrast to the claimed invention in claims 1 and 5, the instruction signals of Fallside exist only in the FPGA 0. See FIG. 5. Similarly, while Smith mentions that functions of an application are partitioned into blocks, Smith does not disclose, teach or suggest a method that can create a logic circuit for each processing unit as claimed in independent claim 18. Moreover, Smith only executes partitioning at a functional level.

M.P.E.P. § 2131 states that “[t]he identical invention must be shown in as complete detail as is contained in the claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989). Here, for the reasons set forth above, Fallside and Smith do not disclose the invention in as complete detail as disclosed in independent claims 1, 12, 14, 16, 18, 20 and 21. Accordingly, Applicant respectfully request that the rejection be withdrawn and independent claims 1, 12, 14, 16, 18, 20 and 21 be allowed. Further, claims 2-11, 13, 15, 17 and 22 depend from one of independent claims 1, 12, 14, 16, 20 and 21 and should therefore be allowable for the reasons set forth above without regard to further patentable limitations cited therein.

For example, the subject matter of the present invention does not minimize execution time as mentioned on line 19 of page 11. Instead, the present invention is directed to a means for effectively controlling switching of multi computer text (the sequence of a divided application program). For example, the subject matter disclosed in claim 2 (a plurality of banks) makes it possible to effectively switch the divided application according to claim 1. Further, concerning claim 5, the Office Action alleges that “FPGA_PROG” of Fallside is the same as “cancel_prg” of the present invention. However, FPGA_PROG executes initialization and does operate analogous to the cancel_prg as claimed in claim 5. Accordingly, Applicant requests that claims 2-11, 13, 15, 17 and 22 be allowed.

Claim Rejections under 35 U.S.C. § 103

Claims 2 and 5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fallside in further view of U.S. Patent No. 6,034,538 (“Abramovici”) and U.S. Patent No. 6,573,748 (“Trimberger”). Claims 3-4, 16-17 and 21-22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fallside in view of Trimberger. Claims 6-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fallside in further view of U.S. Patent No. 5,887,189 (“Birns et al.”). Claims 8-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fallside and Birns in further view of U.S. Patent No. 5,473,763 (“Stewart”). Claims 10 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fallside in view of U.S. Patent No. 4,860,192 (“Sachs”). Claims 13 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fallside in further view of Abramovici.

In response, for the reasons set forth above, Applicant respectfully request that the rejection be withdrawn. Claims 2-11, 13, 15, 17 and 22 depend from one of independent claims 1, 12, 14, 16, 20 and 21 and should therefore be allowable for the reasons set forth above without regard to further patentable limitations cited therein. In addition, Abramovici, Trimberger, Birns et al., Stewart and Sachs fail to cure the deficiencies of Fallside. Accordingly, Applicant requests that claims 2-11, 13, 15, 17 and 22 be allowed.

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are

needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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